**THE GOLDEN AGE OF THE GUPTA**

The Gupta Empire was an ancient Indian empire that was founded in 320 CE and survived until about 550 CE. The Gupta Empire covered most of north and central India, as well as Bangladesh. It was known to be one of the most peaceful and wealthy civilizations of its time. The Mauryan Empire collapsed in 185 B.C.E, after their final king was assassinated. For the next 500 years, the many states in India were at constant war. When Chandragupta ascended the throne and began the notable empire in 320 CE, the time of darkness was reversed. Chandragupta set up a stable civilization with a well functioning government, but his son, Samudragupta, was the individual responsible for extending the empire. He raided through Indian territories with little mercy. One unique tactic by the ruler was using war elephants in his conquests.

**Gupta Culture**

Although Samudragupta was a fighter, he loved the arts as well. Artists were so highly appreciated in the Gupta Empire that they were actually paid for their work.  After the conquests of expanding the empire, the Gupta’s were relatively peaceful. Because of this, the Gupta’s were very tolerant of other religions, specifically Buddhism, even though their culture revolved around Hinduism. The prosperity of the civilization grew, especially after Chandragupta II succeeded his father. This allowed for lots of leisure time within the society. This spare time permitted for the Gupta’s to be successful with literature as well as mathematical and scientific endeavors. Literature developed extensively; Sanskrit writing became a great beneficiary to the empire. The free expression and creativity in the writing was revolutionary.

**Gutpa Poetry and Literature**

During the Gupta Empire literature was produced extensively. The most common form of literature in the empire was narratives. These narratives focused primarily on human behaviors, instead of religion and philosophy, which was groundbreaking. Some of the most prevalent narratives were fables and tales. These fables featured animals that played the parts of kings, princes, princesses, ministers, and spies; usually containing a comedic lesson of wisdom. Poetry and romantic comedies were also very widespread in narratives. Medical texts were revolutionary during the Gupta Empire as well. Sanskrit texts such as “Sushruta Samhita” contained concepts of ayurvedic medicine. In such literature there were countless entries about surgery; broadening the knowledge of the procedure of lifesaving practices. The ancient text “Kama Sutra” was about human sexual behaviors. This was a new concept in health and medicine, and it had a major influence. Sanskrit literature was transformed during the reign of the Gupta. Historians argue that Sanskrit literature was at its highest point during the Gupta, mainly due to the vast wealth and peace of the empire. Several Gupta rulers patronized Sanskrit literature, which made it increasingly popular. Chandragupta II sponsored this writing so much that he had nine poets who permanently resided in his court. The sharing of knowledge introduced by literature allowed for much advancement in both science and mathematics.

**Gupta Mathematics**

This creativity of the empire also translated into mathematics. Perhaps one of the Gupta’s most notable accomplishments was the discovery of the decimal system and zero as a placeholder. The decimal system and zero as a placeholder revolutionized mathematics and allowed for new equations, theorems, notations, and more to be established. The most significant mathematical discovery was the invention of the numerals. The number system was developed by a mathematician and astronomer named Aryabhatta in 498 CE. This system became known as the Arabic numerals, but it is really a Gupta accomplishment. These numerals paved the way for scientific discoveries during the Gupta Empire as well as today. Another notable accomplishment by the Gupta was developing zero and a decimal system. This concept was also developed by Aryabhatta around a similar time. This gave the world a scalable and flexible counting system, which revolutionized mathematics. The decimal system was based on the number 10. We still use a similar decimal system today. Aryabhatta is also known for developing the formula for finding the area of a triangle. Many would argue that there isn’t much importance in triangles, but triangles are the building blocks of all polygons. Therefore, finding the area of a triangle transformed architecture across the world. Plus, almost all mathematical calculations, especially in trigonometry, revolve around A=1/2bh, which is the formula for the area of a triangle. These numerous mathematical discoveries paved the way for many new scientific theories in years to come.

**Gupta Astronomy and Science**

These new doors in mathematics allowed for much advancement in astronomy during the reign of the Gupta. Aryhabhata, an Indian astronomer, discovered that the earth was a sphere and figured out that the solar year had 365 days. This paved the way for countless future astronomers, and gave the world a better understanding of the solar system.   One of such concepts is that of lunar and solar eclipses. Once again, Aryabhatta discovered the cause of this phenomenon. He figured that eclipses occur when the moon comes in alignment with the Sun and the Earth. Aryabhatta was also able to accurately predict the timings of both the lunar and solar eclipses. Until the Gupta Empire, it was believed that the Earth was flat. Aryabhatta put an end to this thought by proving that the Earth and surrounding planets were in fact spheres. He was then able to prove that the earth revolves around the sun and spins on its own axis. Because space travel was out of the question at this current time in history, it was truly remarkable that the discovery of the shape of the Earth was made. Another incredible feat accomplished by Aryabhatta was how long it takes for the earth to make one revolution around the sun. He calculated that one revolution is 365.3586805 days, which is astonishingly close to recent estimates. From this calculation, the notable astronomer was able to closely exhibit the relative orbit of the sun. These scientific advancements as well as many others paved the way for astronomers throughout history.

**Gupta Religion and Ajanta Caves**

The Gupta Dynasty had strong Hinduism beliefs. Both Buddhism and Hinduism were widely prevalent. The characteristic features of Hinduism enabled it to survive whereas the features of Buddhism led to its final decline. The rulers of the Gupta dynasty were all Hindu which is one reason the Buddhists were driven out. They started to prosecute the Buddhists which led them to run to the hills and built caves near Ajanta to live, hide, and worship. They were painted and sculpted showing the life of Buddha and other important Buddhist stories.  This Buddhist community stayed in these caves for about 400 years. The caves that they built were very elaborate pieces of art and depicted stories of Buddhism spanning from 200bce to 650bce. There are 29-30 caves in all and they were built with very simple tools of even rock.

**The Fall of the Gupta**

It wasn’t until about 455 C.E. that the Gupta Empire began having trouble. All the power, wealth, and extravagant living led the rulers to become very lazy. They became invaded by Huns and they became very weakened by the expense of the war. The Huns then took over and all of India split up into individual kingdoms.Ultimately, the Hephthalites, an Asian nomadic tribe, were the reason for the destruction of the civilization. The war with the tribe devastated the empire’s economy. By 550 C.E. the Hephthalites had decimated the Gupta Empire.